What is claimed is:

1. A hyperspectral scene generator comprising:

a broadband optical energy source for linearly radiating energy having wavelengths within a predetermined bandwidth;

an energy dispersion device for dispersing the radiated energy into predetermined spectral bands having respective predetermined positions across a spatial axis and for directing the spatially positioned spectral bands;

a controllable deformable mirror array including a plurality of mirror locations, wherein each of the mirror locations is positioned for receiving at least one of the directed spectral bands and the mirror locations in a same column of the array are for receiving the same directed spectral band, wherein each of the mirror locations includes a mirror selectively movable to a first position and a second position, wherein when a mirror is in the first position substantially all of a directed spectral band received at the mirror location containing the mirror is reflected and wherein when a mirror is in the second position substantially none of a directed spectral band received at the mirror location containing the mirror is reflected; and

a controller for controllably moving each of the mirrors of the array for selectively reflecting the spectral band directed to the corresponding mirror location, wherein the controller receives scene data representative of a simulated scene having a plurality of scene locations and wherein each of the scene locations includes at least one spectral band at a predetermined power level, wherein the controller generates, based on the scene data, control signals for selectively moving the mirrors of the array such that the mirrors located in a same row of the array selectively reflect the directed spectral bands

corresponding to the spectral bands associated with a scene location of the simulated scene.

2. The generator of claim 1, wherein the dispersion device receives the spectral bands reflected by the mirrors of the mirror array and, for each of the rows of the mirrors, projects the received reflected spectral bands to a different predetermined projection location.

3. The generator of claim 1, wherein the controller generates control signals for moving the respective mirrors of the array to the first and the second position in accordance with predetermined powers corresponding to the spectral bands for the respective scene locations.

4. The generator of claim 3, wherein the controller includes a pulse width modulator for generating a switching signal that controls what fraction of a predetermined clock cycle a mirror of the array is maintained at the first position, wherein the clock cycle is a function of an integration period of a sensor of a hyperspectral imaging system.

5. The generator of claim 1, wherein, for each of the rows of the mirrors in the deformable mirror array, the dispersion device redirects the spectral bands reflected by the mirrors of the row to a different predetermined location, the generator further comprising:

a collimator having an exit aperture for causing the scene to be projected upon a region spaced a predetermined distance from the collimator, wherein the dispersion device is positioned at the focal plane of the collimator.

7. The hyperspectral scene generator of claim 1, wherein the broadband source includes an adjustable slit.

8. The hyperspectral scene generator of claim 1 further comprising:

an adjustable slit for receiving the reflected spectral bands projected by the dispersion device.

9. A method for generating a hyperspectral scene comprising:

supplying a linear field of radiance having wavelengths within a predetermined bandwidth;

dispersing the radiated energy into predetermined spectral bands having respective predetermined positions across a spatial axis;

directing the spatially positioned spectral bands upon a deformable mirror array including a plurality of mirror locations, wherein each of the mirror locations is positioned for receiving at least one of the directed spectral bands and the mirror locations in a same column of the array are for receiving the same directed spectral band, wherein each of the mirror locations includes a mirror selectively movable to a first position and a second position, wherein when a mirror is in the first position substantially all of a directed spectral band received at the mirror location containing the mirror is reflected and wherein when a mirror is in the second position substantially none of a directed spectral band received at the mirror location containing the mirror is reflected;

controllably moving each of the mirrors of the array for selectively reflecting the spectral band directed to the corresponding mirror location, wherein the mirrors of the array are controllably moved to the first and second positions based on scene data representative of a simulation scene having a plurality of scene locations and wherein each of the scene locations includes at least one spectral band at a predetermined power level; and

projecting the spectral bands reflected by the mirrors in a same row of the array to a predetermined projection location, wherein each of the rows of mirrors in the array corresponds to a different predetermined projection location.